rules, or merely reflect the competitive nature of the marketplace.[274] The Commission will address home wiring issues when it rules on the petitions for reconsideration that are now pending.

5. *Broadcast Television Service*

97. Broadcast television stations are, and always have been, significant suppliers in the market for delivered video programming. In the 1993-94 season, ABC, CBS, NBC and Fox maintained a combined 72% share of prime-time viewers.[275] Even among those households subscribing to cable, retransmitted broadcast channels had a 46% prime time viewing share in the 1992-93 season, while retransmitted independent broadcast and public television stations maintained 17% and 3% shares respectively.[276] Therefore, two-thirds of all cable households watching television delivered by cable in the 1992-93 season were watching a retransmitted broadcast channel. Moreover, more than one-third of all households that could subscribe to cable service elected not to do so.[277] Accordingly, it would appear that for at least some viewers, broadcast television service satisfies their demand for video programming.[278]

98. Moreover, broadcast television remains an important outlet for the distribution of local news, public affairs, and sports programming. As the Commission found earlier this year, high profile sporting events like the Super Bowl, the World Series, the NBA Championships, and the NCAA basketball championships remain on broadcast television.[279]

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[274] *See* Time Warner's Reply Comments at 25 (arguing that there is nothing illegal about removing its own property from an MDU or terminating its own lines). Some of Liberty Cable's other concerns in its comments can be characterized more appropriately as common law claims for unfair competition rather than violations of the Communications Act. *See, e.g.*, Liberty Cable Comments at 18 (allegation that Time Warner has engaged in false and disparaging advertising against it). Such allegations should not be addressed to the Commission; perhaps they might be brought before a court of competent jurisdiction.

[275] NCTA Comments at 19.

[276] *Viewing Shares Broadcast Years 1983/1984 - 1992/1993*, CABLE TELEVISION DEVELOPMENTS (National Cable Television Assoc.), Apr. 1994, at 5-A (citing A.C. Nielsen Co. statistics).

[277] Of the 92.9 million homes passed by cable at the end of 1993, 57.4 million subscribed to basic cable services. *See* Appendix C, Table 1.

[278] On the other hand, there are various reasons why some households might prefer not to subscribe to cable service, including financial ones.

[279] *Implementation of Section 26 of the 1992 Cable Act -- Inquiry into Sports Programming Migration, Final Report* ¶ 167, 9 FCC Rcd 3440, 3501 (1994).

99. Finally, it has recently been reported that "[d]emand for television stations is at one of its highest levels in years."[280] First-quarter 1994 profits of broadcast television station group owners rose by at least 30%, fueled by increased advertising revenues.[281] In addition, Fox has successfully launched what has been termed an "emerging" fourth broadcast network,[282] and it is widely reported that Time Warner and Paramount, companies with cable television affiliations, are also seeking to create broadcast networks.[283] There are also more broadcast stations today than ten years ago, when the 1984 Act was passed. Between 1984 and 1994, the number of television stations operating in the United States grew from 1149 to 1518, which represents a 32% increase in the number of broadcast signals available to the public.[284]

100. Despite the increases in broadcast television output noted above, the number of broadcasting outlets available to consumers has not kept pace with the virtual explosion of programming alternatives available on cable television. In the last decade, the number of national cable video networks increased from forty-seven to ninety-nine, an increase of 110%.[285] The channel capacity of cable systems has also grown dramatically.[286] Cable systems have responded successfully to consumer demand in the last decade, as the market penetration of the cable industry has increased from 43.7% in 1984, to 62.5% in 1994.[287]

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[280] Julie A. Zier, *TV Buyers Agree: It's a Seller's Market*, BROADCASTING & CABLE, Apr. 25, 1994, at 22.

[281] Geoffrey Foisie, *Good Revenue Gains Spark Dazzling Profit Growth*, BROADCASTING & CABLE, Apr. 25, 1994, at 18.

[282] *Evaluation of the Syndication & Fin. Interest Rules, Memorandum Opinion & Order*, 8 FCC Rcd 3282, 3331-35 (1993); *Memorandum Opinion and Order on Reconsideration*, 8 FCC Rcd 8270, 8303 (1993), *appeal denied, Capital Cities/ABC, Inc. v. FCC*, 29 F.3d 309 (7th Cir. 1994).

[283] Joe Flint, *Clash of the Titans, Fifth-Network Style*, BROADCASTING & CABLE, Dec. 20, 1993, at 38-39; Tim Jones, *TV Merger Talks Just A Start; Off-Camera Maneuverings in the TV and Movie Industries Could Amount to a Fundamental Reordering of the Entertainment Power Structure*, CHI. TRIB., Sept. 2, 1994, at 1 (Business).

[284] BROADCASTING & CABLE YEARBOOK 1994 ("1994 YEARBOOK") C-218 (R.R. Bowker, pub. 1994).

[285] *National Cable Video Networks by Type of Servs. 1976-1993*, CABLE TELEVISION DEVELOPMENTS, (National Cable Television Assoc.), Apr. 1994, at 7-A.

[286] *See* Appendix C, Tables 2 & 3.

[287] *Basic Cable 1975-1983*, CABLE TELEVISION DEVELOPMENTS (National Cable Television Assoc.), Apr. 1994, at 2-A.

101. The Commission found in 1991, that the availability of over-the-air broadcast signals, can, under certain circumstances, have some constraining effect on cable system conduct.[288] However, cable systems offer a "steadily-expanding complement of specialized program services," which can increasingly meet consumer demand for more video programming choices.[289] Accordingly, any constraining effect appears to decrease to the point where the menu of available broadcast signals is insufficient to constrain cable market power. Most recently, the Commission examined the competitive effect of broadcast stations on cable rates in connection with the *1994 Rate Report & Order*. There, the Commission's statistical analysis was consistent with a finding that the availability of six or more local broadcast stations does not constrain cable rates.[290]

102. Advances in broadcast technology and regulatory policy might allow for multichannel broadcasting of digitally-compressed signals.[291] The Commission has recognized that multiplexed, multichannel broadcast signals could provide a competitive check on the exercise of market power by cable systems in the future. In its *1993 Rate Report & Order*, the Commission stated that "should digital compression or other technology advance to the point that a single broadcaster in a community were able to offer programming comparable to that offered by a cable system, such a broadcaster might well be deemed an MVPD

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[288] *1991 Effective Competition Report & Order* ¶ 22, 6 FCC Rcd at 4549. The competitive relationship between broadcast stations and cable systems is complicated by the fact that the signals of most local broadcast stations are retransmitted by cable systems. On the one hand, cable operators and broadcasters are direct competitors in certain markets, such as the market for local spot advertising. On the other hand, the programming of local broadcast stations is an important input for cable systems, which enhances the value of cable services offered to subscribers. Cable systems also provide an additional mode of distribution for broadcasters, which supplements over-the-air transmission.

[289] *1990 Cable Report* ¶ 69, 5 FCC Rcd at 4971-72. In Section III.A of this *Report*, the Commission reviews its prior findings regarding the constraining effect broadcast availability might have on cable system pricing.

[290] *1994 Rate Report & Order*, *supra* note 50, Appendix C at 21 & n.54.

[291] *See* TOWARD COMPETITION, *supra* note 132, at 141-47.

effectively competing with the cable operator."[292] The Commission reaffirms that possibility here.

C. Other Actual or Potential Competitors

1. Local Exchange Carrier (LEC) Entry

103. As noted in the *NOI*, the participation of local exchange carriers ("local telephone companies" or "LECs") in the multichannel video marketplace was not included in the competition analysis of the *1990 Cable Report* because it was deemed unlikely to occur in the near term.[293] At that time, local telephone companies were prohibited by statute and federal regulation from providing video programming directly to subscribers within their service areas.[294] While LECs were permitted to provide video programming outside their

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[292] *1993 Rate Report & Order* ¶ 24, 8 FCC Rcd at 5652-53 (footnotes omitted); *see also* NCTA Comments at 18. There are, however, indications that television broadcasters, if permitted to provide multiple channels of programming over the same 6-MHz signal, might seek to provide services other than the multichannel video services typically associated with cable television operators and their competitors. *See, e.g.*, John D. Abel, *Next Generation Media -- Convergence and Multimedia Broadcasting* 6-7 (Exec. V.P. National Association of Broadcasters May 1994) (stating that applications of digitalized broadcast signals could include: (1) a single high definition television ("HDTV") signal of extremely high quality; (2) an HDTV signal of lower quality and data about that signal that explains more about the program, provides additional camera angles and other program information; (3) multiple full motion video signals (three-to-five per 6 MHz broadcast channel); and (4) a video signal and separate bit streams devoted to receivers connected to telecopiers, computers, personal digital assistants, special audio receivers, pagers, separate non-video bit streams for e-mail, paging, PDAs, utility load management, data transmissions and telecopiers.)

[293] *1990 Cable Report* ¶ 108, 5 FCC Rcd at 5019.

[294] Section 613(b) of the Communications Act, 47 U.S.C. § 533(b), prohibits a common carrier from providing video programming directly to subscribers in its telephone service area, either directly, or indirectly through an affiliate owned by, operated by, controlled by, or under common control with the common carrier. That statutory provision is referred to as the cross-ownership ban. In 1990, the Commission further restricted LECs to strict carrier-user relationships with cable operators, except in rural areas where telephone companies were permitted to provide video programming to subscribers within their service areas. *See* 47 C.F.R. §§ 63.54, 63.58 (1990).

In addition to the restrictions contained in the Commission's rules, the court-ordered divestiture agreement under which AT&T divested its local exchange service business (the Modified Final Judgement or "MFJ") restricts the Bell Operating Companies' ("BOCs") ability to provide video programming services because its terms prohibit BOCs from

(continued...)

telephone service areas, and channel service to unaffiliated cable operators within their service areas, few LECs participated in such ventures.[295]

104. Since 1990, the Commission has adopted orders easing the regulatory restrictions and creating a "video dialtone" ("VDT") framework for LEC participation in the multichannel video distribution marketplace consistent with the statutory prohibition.[296] That VDT framework, along with technological advances, has spurred increased video-related activity by LECs, including several market and technical trials and twenty-four applications for permanent authority covering over 8.5 million homes.[297] These applications, taken together, constitute a promising source of competition to cable operators for the multichannel distribution of video programming.

105. In this section of the *Report,* the Commission reviews: (1) the regulatory and statutory framework for LEC participation in the provision of video programming to subscribers; (2) the technology involved in deployment of a VDT system; (3) the status of the authorized market and technical trials; and (4) the applications for permanent VDT authorizations. The Commission also discusses the technology and architecture of the systems, and the regulatory and reporting issues that may affect the potential of this technology to provide competition to cable.

106. Regulatory Framework for LEC Participation in Video Transport Services. Under the VDT regulatory framework adopted by the Commission in 1992, a LEC may make available, on a nondiscriminatory common carrier basis, a platform capable of providing nondiscriminatory access to multiple video programmers and of delivering video

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[294](...continued)
providing inter-local access and transport area ("interLATA") services, and from manufacturing telecommunications equipment. *United States v. AT&T,* 552 F. Supp. 131 (D.D.C. 1982), *aff'd sub nom. Maryland v. United States* 460 U.S. 1001 (1983).

[295] *Cf. Pacific Bell,* 60 RR2d 1175 (CCB 1986), *recon. granted in part,* 2 FCC Rcd 265 (1987), *aff'd, Century Fed., Inc. v. FCC,* 846 F.2d 1479 (D.C. Cir. 1988) (channel service); *General Tel. Co.,* 4 FCC Rcd 5693, *rev'd sub nom., National Cable Television Assoc., Inc. v. FCC,* 914 F.2d 285 (D.C. Cir. 1990), *on remand, General Tel. Co.,* 8 FCC Rcd 8178, *admin. stay denied,* 8 FCC Rcd 8753 (1993), *petition for review pending, GTE Cal. v. FCC* No. 93-70924 (9th Cir.), *and judicial stay granted* (9th Cir. Jan. 5, 1994) ("good cause" waiver of cross-ownership ban).

[296] The Commission began its re-examination of the telephone-cable company cross-ownership restrictions with a notice of inquiry in 1987. *Telephone Co.-Cable Television Cross-Ownership Rules, Sections 63.54-63.58, Notice of Inquiry,* 2 FCC Rcd 5092 (1987).

[297] Appendix D of the *Report* contains a list of LEC applications for trial and permanent service, and Appendix E of the *Report* contains detailed information about the trials, and descriptions of the services proposed in the applications for permanent service.

programming and other services to end users within its local telephone service area.[298] The LEC may also provide additional enhanced and non-common carrier services to customers of the common carrier platform.[299] In fashioning the VDT scheme, the Commission determined that the statutory cross-ownership restriction applies only to LECs within their local exchange service areas, and not to interexchange carriers.[300] In addition, neither a LEC offering VDT service, nor its programmer-customers, is required to obtain a local cable television franchise.[301] A LEC may own up to five percent of a video programmer, and participate in certain non-ownership affiliations with video programmers that use the basic platform.[302] Authorization pursuant to Section 214 of the Communications Act ("Section 214 authorization") is required for LEC provision of VDT service, and the Commission has established safeguards to prevent discrimination and cross-subsidization.[303]

107. As noted above, a LEC may also participate in video transport service through the provision of traditional channel service within its telephone service area to unaffiliated

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[298] *Telephone Co.-Cable Television Cross-Ownership Rules, Sections 63.54 - 63.58, Further Notice of Proposed Rulemaking, Second Report & Order, Recommendation to Congress, & Second Further Notice of Proposed Rulemaking ("Telco-Cable Second Report & Order")* ¶ 2, 7 FCC Rcd 5781, 5783 (1992), *recon. pending, and appeal pending sub nom., Mankato Citizens Tel. Co. v. FCC,* No. 92-1404 (D.C. Cir. Aug. 26, 1994). Under the VDT framework, multiple service providers, or programmer-customers, acquire capacity from the LEC on a tariffed basis to provide video programming and other services to end users.

[299] *Id.*

[300] *Telephone Co.-Cable Television Cross-Ownership Rules, Sections 63.54 - 63.58, Further Notice of Proposed Rulemaking, First Report & Order & Second Further Notice of Inquiry ("Telco-Cable First Report & Order")*, ¶ 46, 7 FCC Rcd 300, 323 (1991), *recon. granted in part*, 7 FCC Rcd 5069 (1992), *appeal denied sub nom. National Cable Television Assoc. v. FCC*, ___ F.3d ___, No. 91-1649 (D.C. Cir. Aug. 26, 1994).

[301] *Telco-Cable First Report & Order, on reconsideration*, 7 FCC Rcd 5069. Bell Atlantic reportedly recently announced its intention to contribute funds to municipal governments in areas where it constructs and operates VDT service. *See Telcos Approach Locals on Video Dialtone*, BROADCASTING & CABLE, Aug. 8, 1994, at 12.

[302] *Telco-Cable Second Report & Order,* 7 FCC Rcd 5781. In adopting relaxed ownership and non-ownership rules, the Commission determined that the statutory restriction of 47 U.S.C. § 533(b) was meant to be less restrictive than the Commission's prior rules. *Id.* ¶ 66.

[303] *Id.*

cable systems.[304] The VDT framework does not affect this traditional service offering. Consistent with the statutory restriction, a LEC is also permitted to own and operate cable facilities outside its service area, and to own video programming.[305]

108. The Commission has recommended that Congress repeal the telephone company-cable company cross-ownership prohibition and permit LECs to provide video programming directly to subscribers within their service areas.[306] The cross-ownership restriction was instituted by the Commission in 1970, following a series of proceedings in which the Commission found that telephone companies denied access or provided discriminatory access to cable systems to utility poles necessary for cable distribution.[307] Certain aspects of the regulatory restriction were codified by Congress in the 1984 Cable Act.[308] In 1993 the U.S. District Court for the Eastern District of Virginia held the cross-ownership prohibition unconstitutional as applied to Bell Atlantic in its service areas; in 1994 US West obtained a similar ruling in the U.S. District Court for the Western District of Washington.[309] The other Regional Bell Operating Companies ("RBOCs") have each filed

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[304] *See, e.g., Pacific Bell*, 60 RR2d 1175 (CCB 1986), *recon. granted in part*, 2 FCC Rcd 265 (1987), *aff'd sub nom. Century Fed., Inc. v. FCC*, 846 F.2d 1479 (D.C. Cir. 1988); *Pacific Bell II*, 6 FCC Rcd 688 (1991).

[305] For example, within the past year: Southwestern Bell acquired two operating cable systems in the Washington D.C. metropolitan area from Hauser Communications; US West purchased several cable systems in the Atlanta, Georgia area; and BellSouth entered into an agreement to acquire a 22.5% interest in Prime Cable, a Texas-based MSO. *See Telco Television Update*, BROADCASTING & CABLE, Aug. 15, 1994, at 7. With regard to LEC ownership of video programming, it is noted that US West holds an interest in Time Warner Entertainment, and NYNEX owns part of Viacom Inc. *Id.*; *see also Time Warner Entertainment Company, L.P. & US West Communications, Inc.*, 8 FCC Rcd 7106 (1993) (temporary waiver of the cross-ownership rules granted to Time Warner for 18 months to divest cable systems within US West's service areas).

[306] *Telco-Cable Second Report & Order*, 7 FCC Rcd 5781.

[307] *Applications of Tel. Cos. for Section 214 Certificates for Channel Facilities Furnished to Affiliated Community Antenna Television Sys.*, 21 FCC 2d 307 (1970), *appeal denied, General Telephone of the Southwest v. U.S.*, 449 F.2d 846 (5th Cir. 1971).

[308] Communications Act § 613(b), 47 U.S.C. §533(b)(1984).

[309] *Chesapeake & Potomac Tel. Co. v. United States*, 830 F. Supp. 909 (E.D. Va. 1993), *Amended Final Order*, No. 92-1751-1 (Oct. 7, 1993), *appeal docketed*, Nos. 93-2340, 93-2341 (4th Cir., Oct. 15, 1993) (Section 533(b) held unconstitutional as applied to Bell Atlantic within its service areas); *US West, Inc. v. United States*, No. C93-1523R (W.D. Wa. June 14, 1994), *appeal docketed*, No. 94-35775 (9th Cir., August 3, 1994) (Section 533(b) held unconstitutional as applied to US West within its service areas). *But see Marsh Media,*

(continued...)

similar challenges to the constitutionality of the cross-ownership ban in federal district courts in their service areas, as has the United States Telephone Association on behalf of its members.[310]

109. Overview of LEC Applications for VDT trials and for Permanent Services. Since adoption of the VDT regulatory framework, the Commission has granted applications by five different LECs for technical and market trials.[311] Five additional applications for new or expanded trials are pending before the Commission. The cost estimates for the various trials range from $2.5 million to $11 million and cover between 250 to 2000 households per trial.[312] Twenty-four applications for permanent commercial VDT service have also been filed with the Commission, including applications by six of the seven RBOCs, as well as GTE.[313] These applications propose VDT platforms using various distribution technologies which, if granted, would provide service to over 8.5 million homes.

110. In July 1994, the first permanent Section 214 authorization was granted to New Jersey Bell for Dover Township.[314] Pursuant to that grant, New Jersey Bell is authorized to construct and operate a system to provide VDT service to approximately 38,000 homes using a FTTC architecture, with coaxial cable and copper wire for the final link to the home and providing initial digital capacity of 64 channels, conditioned upon expanding capacity to 384 digital channels by January 3, 1995.[315] FutureVision of America, Corp., the initial programmer-customer, is limited to a maximum of 32 channels (half the initial channel

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[309](...continued)
Ltd. v. FCC, 798 F.2d 772 (5th Cir. 1986) (First amendment challenge to television-cable cross-ownership restriction of Section 533(b) held foreclosed by Supreme Court decision in *FCC v. National Citizens Committee for Broadcasting*, 436 U.S. 775 (1978), upholding television-newspaper cross-ownership rule).

[310] *United States Tel. Assoc. v. United States*, Case No. 1:94CV01961 (D.D.C., filed Sept. 12, 1994).

[311] *See* Appendix E.

[312] *See Application of US West Communications, Inc. for Section 214 Auth. to Provide VDT Servs. in Omaha, Neb. ("US West VDT Application")* ¶ 24 n.59, 9 FCC Rcd 184, 188 n.59.

[313] *See* Appendix E.

[314] *See Application of New Jersey Bell Tel. Co. for Section 214 Auth. to Provide VDT Servs. in Dover, N.J. ("New Jersey Bell VDT Application")*, 9 FCC Rcd 3677 (1994).

[315] New Jersey Bell predicts that 35% of the homes passed will become end-user subscribers. *New Jersey Bell VDT Application* ¶ 3, 9 FCC Rcd 3678.

capacity) during the six-month interim transition period from a 64 channel system to a 384 channel system.[316]

111. Reports on the status of the trials have been submitted by Bell Atlantic and NYNEX, and a tariff has been filed by Rochester Telephone. In other filings and comments in this proceeding, various LECs have proffered their views on the status of VDT and current technology.[317]

112. Technology and Architecture Issues. In addition to regulatory and legal constraints discussed above, technology has also played a role in restraining the entry of LECs into the multichannel video programming distribution marketplace. While an infrastructure owned by telephone companies currently exists for delivery of narrowband voice communications to most homes and businesses in the nation, that infrastructure is unable to transport and deliver multichannel video programming to multiple end users. Various techniques, technologies and architectures for delivering broadband video signals are currently being tested. Some of these include: optical digital loop carrier systems, fiber to the node ("FTTN"), fiber to the curb ("FTTC"), fiber to the home, hybrid fiber-coax networks ("HFC"), asynchronous digital subscriber line ("ADSL"), and various broadband switches. For a brief description of these technologies, see Appendix B.

113. Initially, US West asserts that analog-based transmission appears to be preferable to digital from the perspective of end user access and program availability.[318] However, analog channels impose capacity requirements that limit the expandability of VDT offerings.[319] NYNEX's report on the status of its VDT trial indicates that its trial platform provided sufficient analog channel capacity to accommodate all parties requesting direct

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[316] According to a recent trade press report, Cablevision Systems, Inc., the fifth largest MSO, has requested access to channel capacity on the Dover VDT platform. Kent Gibbons, *Cablevision Wants Piece of VDT Network*, MULTICHANNEL NEWS, Aug. 29, 1994, at 1; *Bell Atlantic VDT Plan Hit*, TELEVISION DIGEST, Aug. 29, 1994.

[317] The Bell Atlantic, Rochester Telephone and other reports and filings are summarized in Appendix E.

[318] *US West VDT Application* ¶ 7-8 nn. 18-19, 9 FCC Rcd at 188 nn. 18, 19. That preference is likely attributable to the fact that nearly all television programming has been created in an analog format, and cable-ready television sets can display such programming without a set top converter box. It should be noted, however, that analog systems cannot economically be carried on fiber. *Cf.* JACK L. DEMPSEY, TELECOM BASICS 47 (1988).

[319] For example, the first phase of the NYNEX VDT trial utilizes an analog system: the platform, with 750 MHz of transport spectrum, can deliver 110 6-MHz NTSC format analog channels or a combination of 80 analog channels and more than 300 3.5-Mb/s MPEG format channels. *See* Rob Rockefeller, *Putting Video Dialtone to the Test in Manhattan,* TELEPHONY, June 13, 1994, at 46. *See* Appendix B for definitions of terms.

access to such channels, but was unable to provide sufficient stored access capacity.[320] GTE believes that compression capabilities will have a competitive impact beginning in 1995.[321] Other commenters assert that the limitations of analog may cease to be a constraint when the price of analog-to-digital conversion declines significantly and more programming is digitally encoded.[322] GTE predicts that digital compression will be readily available during 1995, and broadband switching sometime during 1996.[323]

114. The ability of LECs to use their existing infrastructure to offer video services may also play a role in the deployment of VDT as an effective competitor to cable. Just a few years ago, industry projections for upgrading the telephone infrastructure by installation of fiber optics suggested that VDT deployment could only be slated for the next century.[324] However, with new technologies and architectures, those projections have changed significantly. For example, ADSL technology and integrated HFC networks are both expected to speed deployment of VDT.[325] Bell Atlantic's report on the status of its technical trial notes that while technical difficulties were experienced with some of the prototype video decoders, ADSL is "proving to be a successful medium for delivery of voice, video and data services."[326] Rochester Telephone, however, notes that current ADSL technology is capable

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[320] *Six Month Compliance Report of NYNEX ("NYNEX Six Month Report")*, Attachment 2, at 5-6, Attachment 3, *Application of NYNEX for Section 214 Auth. to Provide VDT Servs. In New York City*, File No. W-P-C 6836 (filed July 15, 1994). With direct access, a VDT programmer-customer continually transmits programming over a particular channel. With stored access, the programmer-customer provides a data base of programming that the subscriber can access, similar to selecting a song from a juke box.

[321] GTE Comments at 13.

[322] *US West VDT Application*, ¶ 27 n.66, 9 FCC Rcd at 189 n.66.

[323] GTE Comments at 13.

[324] *See, e.g.*, HENRY GELLER, FIBER OPTICS: AN OPPORTUNITY FOR A NEW POLICY (1991). Such projections generally assumed fiber to the home was necessary to effectively transport video.

[325] Most of the applications for permanent VDT authorizations propose some type of HFC architecture. According to a recent FCC report, it is estimated that the interexchange carriers deployed 2.5 million fiber miles as of the end of 1993; the BOCs have deployed 6.3 million fiber miles; and all local operating companies have deployed over 7.2 million fiber miles. Jonathan M. Kraushaar, Fiber Deployment Update -- End of Year 1993 (May 1994) (available in reference room at the Federal Communications Commission, Common Carrier Bureau, Industry Analysis Division).

[326] *Six Month Compliance Report of Bell Atl. Co. ("Bell Atl. Six Month Report")*, *Application of Bell Atl. for Section 214 Auth. to Provide VDT Servs. in No. Va.*, File No. W-P-C 6834 (filed Sep. 27, 1993). ADSL is a form of signal compression that enables (continued...)

of delivering only one retransmitted broadcast signal to a customer, *i.e.*, end users are able to select only one programmer-customer at a time from the available service providers using the ADSL system.[327] GTE notes that information about customer satisfaction and the migration path for ADSL technology (*e.g.*, to accommodate High Definition Television ("HDTV")) are not known.[328] Bell Atlantic projects that recent innovations in encoding, compression and multiplexing technology are expected to permit delivery of "live" broadcast programming over copper loops beginning in 1995, and that digital pointcast capability using broadband switching technology will become generally available beginning in 1996.[329]

115. With respect to end-user concerns, NYNEX notes that tests of the hybrid fiber-coax architecture demonstrate that if two customers are served by the same drop, it is not possible for both customers to choose different programmers.[330] Nevertheless, NYNEX reports that the hybrid fiber-coax network is successfully delivering direct and stored access analog VDT services, and that the baseband analog switch is effectively delivering menu service and video and audio signals from multiple video information providers to the end users, who have access to interactive services. Switched access has not yet been introduced on the NYNEX analog platform because the analog format is not capable of managing sessions for video-on-demand applications.[331] In other contexts, however, GTE asserts that technology is currently available to provide enhanced video services packaging for consumers.[332]

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[326](...continued)
existing copper twisted pairs to carry one or more television signals, along with telephone service, to the subscriber. Bell Atlantic reported that distance ranges on the decoders -- 11,000 feet when used with 26 gauge wire -- were less than expected and that subscribers experienced problems with non-synched voice and video and video freeze frames with some decoders. It reports that the problems are with the decoders, not the ADSL system.

[327] *Application of Rochester Tel. Co. to Conduct a Market Test of VDT Servs. in Rochester, N.Y.* ¶¶ 7-8, DA Docket No. 94-275 (1994) (File No. W-P-C 6867 1994).

[328] GTE Comments at 12. GTE also contends that the competitiveness of ADSL systems cannot be validly compared to cable systems because cable operators are rapidly deploying hybrid fiber coax systems. *Id.*

[329] Bell Atlantic expects to begin testing digital pointcast capability in the Washington D.C. metropolitan area in 1995. Bell Atlantic Comments at 12.

[330] *See, e.g., NYNEX Six Month Report*, Attachment 6, at 4, WPC-6836. Providing separate subscriber drops to each customer solves this problem.

[331] *NYNEX Six Month Report*, Attachment 6, WPC-6836. Rather, NYNEX employs a "video juke box" to deliver stored and timeshifted video information provider programming to the limited base of interactive trial end-users, with VCR-like functionalities. *Id.*

[332] GTE Comments at 12.

116. Regulatory and Statutory Issues. LECs commenting in this proceeding assert that there are two reasons why VDT service has not yet proven itself as a viable competitor to cable service: (1) the statutory ban on the provision of video programming by LECs to subscribers in their own service area; and (2) the fact that the Commission has not yet granted most of the Section 214 VDT applications. The LEC commenters recommend: (1) repeal of the 1984 Cable Act's ban on LEC provision of video programming;[333] (2) expedition, streamlining or elimination of the Section 214 application process;[334] (3) continued resistance to the imposition of local franchise requirements on LECs;[335] and (4) regulatory parity with cable.[336] GTE asserts that adjustments in the rate regulation framework for the cable industry should correspond with relaxation of LEC price caps, such that both industries are provided incentives to compete on the basis of price and service.[337] As noted above, the Commission has recommended to Congress the repeal of the cable-telephone company cross-ownership ban, and is processing Section 214 applications to provide VDT service.

117. In addition to the hurdles to providing VDT service facing all LECs, the BOCs also must comply with the Modified Final Judgment ("MFJ"). As noted above,[338] the MFJ ban on BOC provision of interLATA services prohibits BOCs from receiving satellite or over-the-air video signals -- which is how cable systems typically receive most of their programming -- without obtaining a waiver of the MFJ. The interLATA ban could also prevent interLATA offering of enhanced gateway services.[339]

118. GTE asserts that the length of time it will take for video dialtone to become an alternative to cable will depend on the LECs' respective market entry rates. Most LECs have

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[333] Bell Atlantic Comments at 7; GTE Reply Comments at 3.

[334] Bell Atlantic Comments at 7-8; NYNEX Comments at 2-4; GTE Comments at 3 n.5, 11, Reply Comments at 3; US West Comments at 3; Ameritech Reply Comments at 3.

[335] Bell Atlantic Comments at 8; GTE Reply Comments at 3.

[336] Bell Atlantic Comments at 8-9; GTE Comments at 3; GTE Reply Comments at 3.

[337] GTE Reply Comments at 5.

[338] *Supra* note 294.

[339] *United States v. AT&T*, 552 F. Supp. 131. The MFJ prohibition on BOC provision of information services was lifted in 1993. *United States v. Western Elec. Co.* 767 F. Supp. 308 (D.D.C. 1991), *aff'd*, 993 F.2d 1572 (D.C. Cir. 1993), *cert. denied sub nom. Consumer Fed. of Am. v. United States*, ___ U.S. ___, 114 S. Ct. 487 (1993). However, BOCs are still currently prohibited from providing interLATA services and designing and manufacturing equipment. *See United States v. Western Elec. Co,*, 1989-1 Trade Cas. (CCH) ¶ 68,400 (D.D.C. 1990), *cert. denied sub nom., Bell Atl. Corp. v. United States*, 488 U.S. 1109 (1991).

announced deployment schedules of five- to ten-year periods.[340] Trade press reports suggest that the BOCs hope to make video-capable networks available to over twenty million homes by the turn of the century.[341]

119. Reporting Issues. In response to the questions posed in the *NOI* regarding appropriate means for assessing the future competitive impact of VDT, nearly all of the commenters argue that data gathered in the technical and marketing trials is highly confidential and proprietary and should not be disclosed to potential competitors; (2) that sufficient information pertaining to system location, subscriber base, channel capacity and pricing will be provided in tariff filings; and (3) that customer proprietary information should not be required to be publicly disclosed in the future.[342] Disclosure of the total number of homes passed by VDT systems is deemed appropriate by the commenters, however, so long as such data is provided on a zip code, or Metropolitan Statistical Area, or state-wide basis.[343] The LECs also assert that subscribership, program offering, and price information should be gathered from programmer-customers who lease transmission capacity on the VDT platforms.[344]

120. Conclusion. A number of issues remain unresolved with respect to the participation of LECs in the delivery of video programming. The regulatory framework for permitting LECs to construct and operate a common carrier VDT platform for the transmission of video programming and other services to end-users is under review by the Commission.[345] Moreover, legislation proposing, among other things, to eliminate the

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[340] For example, GTE states that it plans to expand VDT to 66 markets and 7 million homes within the next 10 years. GTE Comments at 12.

[341] *See, e.g., Telco Television Update*, BROADCASTING & CABLE, Aug. 15, 1994, at 7.

[342] Bell Atlantic Comments at 11; GTE Comments at 7; BellSouth Comments at 2-3; Ameritech Reply Comments at 4.

[343] GTE Comments at 5-6. GTE asserts that a requirement that data be collected and reported on the basis of cable franchise areas would be burdensome.

[344] Bell Atlantic Comments at 11; GTE Comments at 3-5; GTE Reply Comments at 3-4; BellSouth Comments at 3-4; Ameritech Reply Comments at 4. GTE asserts that if the statutory prohibition is lifted, LECs should still not be required to provide such information because it would be tantamount to collecting and reporting the data to competing programmers. GTE Comments at 8-9.

[345] The Commission's decision that neither LECs nor their programmer-customers are required to obtain a local franchise in order to provide video programming to end-users was recently affirmed by the D.C. Circuit. *National Cable Television Assoc. v. FCC*, ___ F.3d ___, No. 91-1649 (D.C. Cir. Aug. 26, 1994).

telephone company-cable company cross-ownership ban is pending before Congress.[346] As noted above, the VDT industry is in its initial planning and construction phases. In future reports, the Commission will further review the development of LEC provision of video programming and its status as a competitive alternative to cable.[347]

2. *Local Multipoint Distribution Service (LMDS)*

121. LMDS is a new technology, similar to MMDS, in which multiple channels of video programming are transmitted using high-frequency microwave channels in the 28 GHz band. Like MMDS, LMDS subscribers must have a special antenna that is located with a line of sight to the transmitter. Because of the propagation characteristics in this frequency band, LMDS requires multiple transmitters in "cells" with radii of three to six miles in order to cover a metropolitan area that could be covered by a single wireless cable transmitter.[348]

122. In 1991, the Commission authorized the Suite 12 Group to provide LMDS.[349] Operating as CellularVision of New York ("CVNY"), it operates its LMDS system in Brooklyn, New York, and provides forty-nine video channels, including two premium movie channels for $29.95 per month. CVNY states that a comparable package from local cable operators would cost $10-20 more per month. CVNY also claims that LMDS provides higher picture quality than is available with cable, and that LMDS could be used as a

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[346] S. 1822, 103d Cong., 2d Sess. (1994); H.R. 3626, 103d Cong., 2d Sess. (1994).

[347] *See, e.g.*, GTE Comments at 12. US West suggests that the Commission should exclude VDT from its annual report to Congress until it is commercially available. US West Comments at 3. Ameritech states that comparisons of the 55 million cable subscribers with the recently granted permanent VDT authorization for 38 thousand homes passed make it patently clear that there currently is no basis to gather meaningful information on the impact of VDT on the market for the delivery of video programming. Ameritech Reply Comments at 3.

[348] TOWARD COMPETITION, *supra* note 132, at 135.

[349] *Application of Hye Crest Management, Inc. for License Authorization in the Point-to-Point Microwave Radio Serv. in the 27.5 - 29.5 GHz Band & Request for Waiver of the Rules*, 6 FCC Rcd 332 (1991). After granting that authorization, the Commission received over 900 applications accompanied by petitions for waivers from entities seeking to provide similar services. The Commission instituted a formal rulemaking proceeding to determine whether the 27.5 - 29.5 Ghz band ("28 GHz band") should be redesignated in order to accommodate multichannel video service, among other proposed uses. *See Rulemaking to Amend Part 1 & Part 21 of the Commission's Rules to Redesignate the 27.5 - 29.5 GHz Frequency Band & to Establish Rules & Policies for Local Multipoint Distribution Service, Notice of Proposed Rulemaking, Order, Tentative Decision & Order on Reconsideration*, 8 FCC Rcd 557 (1993).

platform for telephony as well as video programming.[350] Moreover, CVNY predicts that LMDS will be capable of using digital compression technology whenever it becomes commercially available.[351] CVNY reportedly has "a few hundred" subscribers.[352]

123. In 1991, the Commission stated that while "it is still too early in the development of LMDS to reach firm conclusions on the treatment of LMDS providers as multichannel video programming distributors," the Commission will analyze LMDS providers "for purposes of the effective competition determination in a manner appropriate to the degree of video distribution services they provide."[353]

124. In response to proposals from parties who wish to provide services other than LMDS in the 28 GHz band, the Commission sought and received approval to conduct a negotiated rulemaking among interested parties.[354] One of these parties, Teledesic Corporation ("Teledesic"), which has filed an application with the Commission to provide FSS (fixed satellite service) in the 28 GHz band, submitted comments in this proceeding stating that LMDS would merely duplicate the video entertainment being provided by cable, MMDS, DBS and video dialtone offerings.[355] Teledesic also contends that LMDS has not yet proven its feasibility on a large scale, and therefore, that the Commission should not assume that LMDS could provide competition to cable.[356]

125. Because the Commission has not yet determined whether the 28 GHz band will be designated for use by LMDS operators, it is premature for the Commission to draw any conclusions in this *Report* regarding the feasibility of LMDS or the desirability of a particular outcome of the negotiated rulemaking. If the Commission ultimately concludes that LMDS is to be licensed in the 28 GHz band, LMDS will be included in future reports to Congress.

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[350] CVNY Comments at 3-4.

[351] Fred Dawson, *CellularVision Fights Off New LMDS Challenges,* MULTICHANNEL NEWS, July 11, 1994, at 47.

[352] Teledesic Reply Comments at 5.

[353] *1993 Rate Report & Order* ¶ 25, 8 FCC Rcd at 5653-54.

[354] *Rulemaking to Amend Part 1 & Part 21 of the Commission's Rules to Redesignate the 27.5 - 29.5 Frequency Band & to Establish Rules & Policies for Local Multipoint Dist. Serv., Second Notice of Proposed Rulemaking,* 9 FCC Rcd 1391 (1994).

[355] Teledesic Reply Comments at 2.

[356] *Id.*

3. *Low Power Television (LPTV)*

126. Low power television ("LPTV") refers to use of the VHF and UHF spectra pursuant to the regulatory scheme that was established by the Commission in 1982 as a means of increasing diversity in television programming and station ownership.[357] Although this service has been highly successful in meeting that objective, there is now interest in using LPTV channels to provide multichannel video service.

127. The Commission's rules specifically permit LPTV channels to be used for "subscription television,"[358] whereby a licensee charges subscribers a fee for the provision of one or more scrambled channels and the equipment needed to descramble the signal. Unlike a full-service television station, an entity may hold more than one LPTV license in a particular market.[359] Therefore, an LPTV operator can accumulate a number of channels in a single market to provide multichannel video service. However, the Commission is presently not accepting applications for new LPTV stations for service within 100 miles of the top thirty-six United States cities in order to preserve spectrum availability for the implementation of HDTV systems by full-service stations.[360]

128. Despite that partial application freeze, the Commission received a significant number of LPTV construction permit applications in April 1994. According to an industry report, the interest in obtaining LPTV licenses is the result of a growing interest in providing multichannel LPTV service, and may also have been enhanced by the fact that signal scrambling methods have become more economical and advanced.[361]

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[357] *An Inquiry into the Future Role of Low Power Television Broadcasting & Television Translators in the Nat'l Telecommunications Sys.*, 51 RR2d 476 (1982).

[358] 47 C.F.R. § 73.642(a)(2).

[359] 47 C.F.R. § 74.732(b).

[360] *See Notice of Limited Low Power Television/Television Translator Filing Window,* FCC Public Notice No. 41954 at 1, n.1 (March 3, 1994) (*"LPTV Public Notice"*). The Commission has recognized that LPTV stations have "secondary service status," and as such, must yield to new full-power station assignments for the provision of advanced television services, such as HDTV. *Advanced Television Systems & Their Impact on the Existing Television Broadcast Serv., Memorandum Opinion & Order, Third Report & Order, & Third Further Notice of Proposed Rulemaking* ¶¶ 35-39, 7 FCC Rcd 6924, 6951-6955 (1992) . The application freeze was imposed so as to avoid displacing new LPTV stations and minimize the extent to which LPTV service to the public is disrupted as advanced television systems come on line. *LPTV Public Notice* at 1-2, n.1.

[361] *Scrambled LPTV Service Expected To Grow, Offer Cable-Like Service,* COMMUNICATIONS DAILY, May 20, 1994, at 2; *LPTV Emulating Cable*, TELEVISION DIGEST, May 23, 1994, at 6.

129. The Commission is aware of at least one company that presently provides multichannel LPTV service. Reports indicate that Broadcast Services International, Inc. ("BSI") provides multichannel LPTV service to approximately 500 subscribers in Duluth, Minnesota and to 250 subscribers in nearby Ely, Minnesota.[362] BSI is reportedly focussing its efforts on uncabled rural areas,[363] and it is unclear to what extent BSI's service would be a competitive substitute for cable service.[364] Another possible LPTV site involves Selma, Alabama, where construction permits for multiple LPTV station assignments have been issued to a single applicant. In addition, many of the applications received in April 1994 are for multiple LPTV channel assignments, primarily for rural markets.

130. While multichannel LPTV services may eventually become available in many areas, the application freeze on new LPTV stations within 100 miles of the thirty-six largest United States cities and the spectrum needs of advanced television systems suggest that multichannel LPTV entry will likely be limited to smaller and mid-sized markets. In addition, it is unclear whether multichannel LPTV will enter the market as a competitor to cable, or as a substitute to cable service in largely uncabled areas.

4. Electric Utilities

131. Electric utility companies may provide another potential source for the delivery of video programming.[365] Some municipal electric utility companies are actively engaged in overbuilding privately-owned cable systems, or are presently contemplating such overbuilding.[366] As is the case with LEC provision of VDT services,[367] the need for appropriate safeguards to avoid cross-subsidization between regulated and video distribution businesses is an issue associated with entry by electric utility companies.

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[362] *See Scrambled LPTV, supra* note 361, at 3; Joel Schofield, *LPTV: Finding a place in Wireless Cable*, WIRELESS BROADCASTING MAGAZINE, March/April 1994, at 12.

[363] *Id.*

[364] One report suggests that multichannel LPTV will typically be limited to ten to twenty channels, and potentially thirty channels with signal compression. *LPTV Emulating Cable, supra* note 361, at 6. In contrast, over 95% of the nation's cable subscribers receive 30 or more channels. *See* Appendix C, Table 3.

[365] For purposes of this discussion, electric utilities are considered to include investor-owned utilities, municipal utility systems, and exempt public utility holding companies. *See* 15 U.S.C. § 79c. However, that group could substantially increase if Congress passes pending legislation that would permit registered public utility holding companies to diversify into telecommunications and other industries. S. 1822, 103d Cong., 2d Sess. (1994) (which will, *inter alia*, amend 15 U.S.C. § 79i if adopted).

[366] *See* TOWARD COMPETITION, *supra* note 132, at 22.

[367] *See infra* ¶ 106.

132. Electric utilities' interest in cable television is based on the potential for capitalizing on their existing rights of way, and from the potential for using "demand-side" load management capabilities for the distribution of video programming.[368] "Demand-side" management involves, *inter alia*, a utility's ability to control or limit increases in demand for electricity during peak hours, for example by controlling its customers' air conditioners or pool-heaters through the installation of a broadband communications link to each home.[369]

133. As discussed in Section III.B.1, *supra*, the GEPB (Glasgow Electric Plant Board) in Glasgow, Kentucky is an example of a utility currently providing cable service. GEPB's initial purpose in creating its fully-interactive communications and control systems was simply to find a better way to manage its distribution network, and to reduce energy costs to consumers by monitoring consumption.[370] In June 1989, GEPB began offering cable television service to all 13,000 of its customers in competition with the local cable operator, and it has since acquired fifty percent of the market for cable television service.[371]

5. *Video Cassette Recorders (VCRs)*

134. VCRs (video cassette recorders) are not "multichannel video programming distributors." However, the Commission noted in the *1990 Cable Report* that widespread ownership of VCRs allows many viewers to see over-the-air programs at times other than when they are broadcast, and also permits those viewers to choose pre-recorded tapes on a variety of subjects, giving them more control over both the programming they watch and the

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[368] TOWARD COMPETITION, *supra* note 132, at 23.

[369] *Id.* at 23-24. However, American Electric Power Co. recently committed to implement commercially a technology that allows existing household phone lines to handle some of the key cost-saving tasks that previously had been envisioned for techniques that rely on fiber/coaxial links to the home. The new technology is called "TranstexT" and allows the energy company to conduct demand-side management by sending very low data rate signals over existing telephone connections. According to a trade press article, the use of this technology "could take utilities out of the broadband communications equation for some time to come." Fred Dawson, *Utilities Debate Role in Broadband Networks,* MULTICHANNEL NEWS, July 18, 1994, at 46; *see also AEP Plans to Install 25,000 Residential Energy Management Systems by 1997*, ELECTRIC UTILITY WEEK'S DEMAND-SIDE REPORT, Mar. 31, 1994, at 1; Ron Lietzke, *AEP to Help Customers Cut Bills*, COLUMBUS DISPATCH, Mar. 30, 1994, at F1.

[370] TOWARD COMPETITION, *supra* note 132, at 23 (*citing* Bob Bruce, *The Lure of Fiber Optics,* PUBLIC POWER, Sept.-Oct. 1993, at 16, 18).

[371] *Push by Municipal Utilities*, COMMUNICATIONS DAILY, Jan. 25, 1994, at 4; *Pressure Growing to Make Electric Utilities Major Players in NII*, WASHINGTON TELECOM WEEK, Jan. 28, 1994, at 23.

time they watch it.[372] The evidence in that proceeding demonstrated that VCR penetration had grown dramatically, reaching a penetration level of 72% in 1990, up 30% from 1986. Moreover, the Commission found that nationwide revenues from the sale and rental of video cassettes exceeded the revenues for basic cable service. Therefore, the Commission concluded that high VCR penetration levels and video cassette rentals, combined with broadcast or other over-the-air video delivery systems, offer an alternative that may act as a partial substitute for cable services.[373]

135. Since the *1990 Cable Report* was released, VCRs have become still more prevalent. Time Warner states that by the end of 1993, there were approximately 80.5 million households with VCRs, which compares to approximately 57 million cable households at that time.[374] Although those 80.5 million households with VCRs would account for nearly 84% of all television households in the United States, a study conducted by the Commission following its release of the *1990 Cable Report* found that VCRs are more properly categorized as competitors of premium or pay-per-view cable programming, rather than of cable services generally.[375]

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[372] *1990 Cable Report* ¶¶ 109-10, 5 FCC Rcd at 5019-20.

[373] *Id.*

[374] Time Warner Comments at 14 n.17 (*citing* KAGAN MEDIA INDEX at 14).

[375] *See* FLORENCE SETZER & JONATHAN LEVY, BROADCAST TELEVISION IN A MULTICHANNEL MARKETPLACE 108 (Federal Communications Commission, Office of Plans and Policy, OPP Working Paper Series, June 1991).

IV.
MARKET STRUCTURE CONDITIONS AFFECTING COMPETITION

136. In this section of the *Report*, the Commission discusses the status of horizontal concentration and vertical integration in the cable television industry, and the competitive effects of that concentration and integration. In brief, the Commission finds that horizontal concentration has increased moderately since it released the *1990 Cable Report*. Vertical integration among programmers and cable operators, on the other hand, has not changed significantly. As part of its responsibility for implementing the 1992 Cable Act, the Commission has adopted and enforced rules to mitigate the anticompetitive effects of such integration on entry of new competitors. Those rules appear generally to be effective in ensuring that those new competitors can gain access to programming produced by vertically-integrated cable companies.[376] Finally, the Commission discusses in the concluding paragraphs of this section certain technological developments that have the potential to change the structure of the industry.

A. Horizontal Concentration In The Cable Industry

137. In the *1990 Cable Report,* the Commission noted that horizontal concentration in the cable industry had significantly increased on a nationwide basis since the passage of the 1984 Cable Act. The Commission concluded that horizontal integration had not only "brought substantial benefits to American consumers, but also has added potential for certain anticompetitive conduct."[377] The benefits included more efficient production as a result of certain economies of scale, and the creation of a pool of capital for investment in programming.[378] The potential anticompetitive effects, on the other hand, included the danger that the larger MSOs would use their size to "extract unreasonable concessions from program suppliers and to unfairly restrain competition from alternative distribution services."[379] The Commission did not express an opinion in the *1990 Cable Report* as to whether the observed increase in horizontal integration was desirable. The Commission did state, however, that it intended to continue monitoring changes in concentration.[380]

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[376] Appendix F contains descriptions of program access cases that the Commission has resolved through September 19, 1994.

[377] *1990 Cable Report* ¶ 13(5), 5 FCC Rcd at 4972.

[378] *Id.* ¶¶ 82-84, 5 FCC Rcd at 5007-09.

[379] *Id.* ¶ 71, 5 FCC Rcd at 5003.

[380] *Id.* ¶¶ 76, 91, 5 FCC Rcd at 5006, 5111.

138. The language of the 1992 Cable Act clearly indicates that Congress recognized the potential for both beneficial and harmful effects from increased horizontal concentration.[381] In Section 11(c) of the 1992 Act, Congress directed the Commission to establish "reasonable limits on the number of cable subscribers a person is authorized to reach through cable systems owned by such person, or in which such person has an attributable interest."[382] Moreover, Congress required the Commission to consider a number of specific public interest objectives when it established those limits.[383] Those requirements reflect Congressional recognition that there are benefits to increased concentration, including the fact that as compared to smaller system operators, large MSOs can more easily risk providing more diverse, innovative, narrowly targeted, and controversial programming.[384] On the other hand, those requirements also reflect a recognition by Congress of the potential for large MSOs to extract concessions from cable programmers in exchange for carriage of their programming, which could discourage entry of new programming services and adversely impact the diversity of programming available for consumers.[385]

139. Pursuant to Section 11(c) of the 1992 Cable Act, the Commission promulgated horizontal ownership rules.[386] Those rules prohibit any entity from having an "attributable interest"[387] in cable systems that reach more than thirty percent of all homes passed nationwide by cable,[388] or thirty-five percent if the additional systems are "minority-

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[381] *See* H.R. REP. NO. 862, *supra* note 11, at 43 (consolidation has benefited consumers with efficiencies in administration, distribution and procurement of programming, and can promote the introduction of new programming services in the market); S. REP. NO. 92, *supra* note 11, at 33.

[382] Communications Act § 613(f)(1)(A), 47 U.S.C. § 533(f)(1)(A).

[383] *Id.* § 613(f)(2), 47 U.S.C. § 533(f)(2).

[384] H.R. REP. NO. 862, *supra* note 11, at 43; *see also 1990 Cable Report* ¶¶ 82-84, 5 FCC Rcd at 5007-09.

[385] H.R. REP. NO. 862, *supra* note 11, at 42-3.

[386] *Implementation of Sections 11 and 13 of the 1992 Cable Act -- Horizontal & Vertical Ownership Limits, Second Report & Order* ("*Second Ownership Report & Order*"), 8 FCC Rcd 8565 (1993).

[387] In determining what constitutes an "attributable interest," the Commission adopted the broadcast attribution criteria contained in 47 C.F.R. § 73.3555. *See* 47 C.F.R. § § 76.501, 76.503(f). That decision was suggested in Senate Report 92. S. REP. NO. 92, *supra* note 11, at 80.

[388] 47 C.F.R. § 76.503(a).

controlled."[389] In deciding upon those percentages, the Commission stated that it was balancing two Congressional concerns. In particular, the Commission said:

> A 30% horizontal ownership limit is generally appropriate to prevent the nation's largest MSOs from gaining enhanced leverage from increased horizontal concentration. Nonetheless, it also ensures that the majority of MSOs continue to expand and benefit from the economies of scale necessary to encourage investment in new video programming services and the deployment of advanced cable technologies."[390]

140. After a federal district court ruled that Section 11(c) of the 1992 Cable Act is unconstitutional,[391] the Commission stayed enforcement of its horizontal ownership rules pending appellate review.[392] In addition, the horizontal ownership rules currently are under reconsideration by the Commission.[393]

1. Status of Concentration in the Cable Industry

141. In most of the local markets where cable operators provide cable service to subscribers, they remain the sole distributors of multichannel video programming. As noted above, there are limited instances of competition through overbuilding in the United States.[394] In addition, suppliers that use technologies other than cable have not yet reached the

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[389] 47 C.F.R. § 76.503(b). "Minority-controlled" is defined as "more than 50 percent owned by one or more members of a minority group." 47 C.F.R. § 76.503(d).

[390] *Second Ownership Report & Order* ¶ 25, 8 FCC Rcd at 8576-77.

[391] *See Daniels Cablevision, Inc. v. United States*, 835 F. Supp. 1, 10 (D.D.C.), *appeal docketed and pending*, Civ. Act. No. 93-5290 (D.C. Cir. 1993).

[392] *Second Ownership Report & Order* ¶ 3, 8 FCC Rcd at 8567.

[393] *See Petition for Reconsideration of Consumer Fed'n. of Am. & Center for Media Educ., Second Ownership Report & Order ("Consumer Fed'n Petition for Recon.")*, MM Docket No. 92-264 (Dec. 15, 1993); *Petition of Bell Atl. for Ltd. Reconsideration, Second Ownership Report & Order ("Bell Atl. Petition for Recon.")*, MM Docket No. 92-264 (Dec. 15, 1993). In their Petition, the Center for Media Education and Consumer Federation of America urge the Commission to establish limits of around 10-20%. *Consumer Fed'n Petition for Recon.* In commenting on that Petition, Viacom recommended a limit of 15%. *Comments on Petition for Reconsideration of Viacom Int'l Inc., Second Ownership Report & Order*, MM Docket No. 92-264 (Feb. 14, 1994).

[394] *Supra* ¶ 54.

subscribership levels necessary for the Commission to conclude that vigorous rivalry currently exists in most local markets for multichannel video distribution.[395]

142. There has been a moderate increase in the nationwide horizontal concentration of the cable industry since the issuance of the *1990 Cable Report*, as measured by the Herfindahl-Hirschman Index ("HHI"),[396] which is a standard measure of horizontal concentration.[397] Whether an HHI measurement, or any measure of concentration at the national level, is meaningful depends on the existence of a national cable market. As is discussed above,[398] the relevant market for the purpose of analyzing competition in the cable industry is generally local, although there may be larger markets in the future, should other technologies become competitive. When examining issues involving cable programming, however, the relevant geographic market may well be national, and in that context, the HHI provides more useful information.

143. In 1990, the national market for the distribution of cable services was unconcentrated, with an HHI of approximately 866. The largest MSO, TCI, had a 24% market share.[399] Taken together, the top four companies had a 47% market share; the top ten had 63%. Between that time and the end of the first quarter of 1994, the market remained "unconcentrated" in terms of horizontal concentration. The HHI for the industry as of March 31, 1994, is 898, which represents a modest increase since 1990.[400] TCI still had the largest market share, 24.8%, an increase of less than one percentage point since 1990. The top four companies still had 47% of the market, and the top ten 63%.

144. At the end of the first quarter of this year, the individual market shares of the rest of the top ten MSOs was as follows: Time Warner was the second largest MSO, with 12.5% of the market; the third largest MSO, Continental, and the fourth largest, Comcast,

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[395] *See infra* § III.B.1.

[396] *See* Appendix G, Tables 1 & 2; NCTA Comments at 20-21.

[397] The HHI is calculated by summing the squares of the firms' percentage shares of the market. 1992 HORIZONTAL MERGER GUIDELINES ¶ 1.5, 4 Trade Reg Rep. (CCH) ¶ 13,104, at 20,573-4 to 20,573-6.

[398] *Supra* ¶¶ 49-53.

[399] Appendix G, Table 2. In 1990, the Commission reported an HHI of 975 (rounding off to the nearest full percentage point). *1990 Cable Report*, Appendix G, Table I, 5 FCC Rcd at 5106-07. All 1990 market share and HHI figures were derived from a base consisting of the top 50 MSOs in the United States. Those top 50 MSOs accounted for 89.6% of the total industry. *Id.* Appendix G, Tables I, II & III, 5 FCC Rcd at 5106-08. In this *Report*, we have revised, and corrected when necessary, the 1990 market share and HHI calculations.

[400] Appendix G, Table 1.

each had approximately 5% of the market; the fifth largest MSO was Cablevision, which had a little less than 4% of the market; the sixth was Cox Cable Communications, Inc. ("Cox"), with a little more than 3%; and the seventh through tenth MSOs each had between 2.25% and 2.5% of the market.

145. By the middle of September, 1994, however, transactions had been announced that would significantly alter the market shares of those top ten companies. Three significant mergers have been announced, all of which are expected to be consummated in the near future:[401] (1) the largest MSO, TCI, has agreed to acquire TeleCable, which would add over 700,000 subscribers to TCI's total, increasing its market share to 26.1%; (2) Comcast has agreed to acquire from Rogers (Rogers Communications) those systems in the United States that Rogers acquired from Maclean Hunter earlier this year, which will give Comcast a 5.6% share and move it from fourth place to third place; and (3) Cox, the sixth largest MSO on March 31, 1994, agreed to acquire Times Mirror Cable Television ("Times Mirror"), which would give Cox a 5.4% share of the market, and make that combined entity the fourth largest MSO, right behind Comcast. In addition to those mergers, Time Warner agreed in September 1994 to (1) consolidate in a joint venture certain of its systems with those operated by Newhouse Broadcasting Corp. and Advanced Publications, Inc., and (2) purchase Summit Communications Corporation (which has 160,000 subscribers). Those transactions will give the second largest MSO, Time Warner, operating control of the seventh largest MSO, causing Time Warner's market share to increase to 15.21%.

146. If the four transactions listed above are consummated, the HHI will rise to approximately 1051.[402] Standard antitrust analysis considers a market with an HHI between 1000 and 1800 to be "moderately concentrated."[403] According to the guidelines developed by antitrust enforcement agencies, "[m]ergers producing an increase in the HHI of more than 100 points in moderately concentrated markets post-merger potentially raise significant

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[401] The management of Adelphia (the 11th largest MSO) has stated that "the telecommunications industry, including the cable television and telephone industries, is in a period of consolidation characterized by mergers, joint ventures . . . ." ADELPHIA COMMUNICATIONS CORP., FORM 10-Q 11 (Jun. 30, 1994). During this period, TCI re-acquired Liberty Media, a transaction approved by the Commission. That acquisition did not change TCI's market share or the HHI measurement relevant herein, as the Commission concluded that throughout the period, the firms were commonly controlled. *See Tele-Communications, Inc. & Liberty Media Corp., Applications for Consent to Transfer Control of Radio Licenses, Order ("TCI/Liberty License Transfer Orders")*, DA 94-832 (File Nos. CAR-44064 *et al.* Aug. 1, 1994) (Chief, Cable Services Bureau).

[402] *See* Appendix G, Table 1A.

[403] HORIZONTAL MERGER GUIDELINES ¶ 1.51, 4 Trade Reg. Rep. (CCH) ¶ 13,104 at 20,573-5 to 20,573-6.

competitive concerns depending on [various] factors . . ."[404] None of the four announced mergers would individually increase the HHI by 100 points.

147. When the Commission established limits for horizontal concentration on a national level, it declined to impose regional limits, concluding that "the benefits and efficiencies of regional concentration outweigh any anti-competitive effects in the local programming and advertising marketplace."[405] At this time, the Commission does not have much evidence concerning regional concentration. Bell Atlantic notes that MSOs have been swapping territories with each other, and sees a trend towards large-scale regional concentration of MSOs.[406]

2. *Competitive Effects of Horizontal Concentration*

148. The comments and reply comments that the Commission has received in this proceeding generally reiterate both the benefits and risks of increased horizontal concentration that have previously been described by both Congress and the Commission in the legislative history of the 1992 Cable Act, the *1990 Cable Report,* and in the horizontal ownership rules.[407] One commenter, TCI, provided additional information addressing the issue whether increased horizontal concentration could adversely affect entry of new programming services -- in its view, whether one MSO can accumulate through acquisition a "critical mass" of subscribers to which all programmers must gain access in order to survive or succeed.[408] Such an MSO would be able to dictate terms to programmers, and in effect, dominate the market for cable television programming. TCI, the largest MSO, with approximately twenty-five percent of the nation's subscribers,[409] denied that it had access to

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[404] *Id.*

[405] *Second Ownership Report & Order* ¶¶ 16-17, 8 FCC Rcd at 8573.

[406] Bell Atlantic Comments at 3-4. *See also* GTE Comments at 15. The June 13, 1994 edition of CABLE WORLD reported that Cox Chairman Jim Kennedy indicated that Cox "will focus its acquisition efforts on systems that geographically match the new company's current properties." K.C. Neel, *Cox-Times Mirror Deal Raises Questions,* CABLE WORLD, June 13, 1994, at 1, 60.

[407] *See, e.g.,* Bell Atlantic Comments at 1-4; NCTA Comments at 20; TCI Comments at 12-13, 20-22, App. A at 12, App. B at 7; Time Warner Comments at 6, 33.

[408] TCI Comments, App. B, at 11-14 (Stanley M. Besen, Steven R. Brenner & John R. Woodbury, An Economic Analysis of the FCC's Proposed Cable Ownership Restrictions (Charles River Assocs. Feb. 9, 1993)).

[409] *See* Appendix G, Table 1